

<i>Thecla</i> sp. in beon group, <i>politus</i> , H. H. Druce?	1 male.
<i>Thecla</i> sp.? in beon group	1 male.
<i>Thecla</i> sp.? in beon group	1 male.
<i>Thecla azia</i> Hewitson	10 specimens.
<i>Thecla salona</i> Hewitson	1 male.
<i>Lycæna cassius</i> Cramer	9 males, 5 females.
<i>Lycæna hanno</i> Stoll	3 males, 2 females.

The capture of 15 species of Erycinidæ and Lycænidæ in a day would lead one to suppose that these families might be numerous in species in the island, and that such is the case is shown by the paper by Mr. William J. Kaye, in the Transactions of the Entomological Society of London for 1904 where there is presented a catalogue of the Lepidoptera Rhopalocera of Trinidad, listing forty-three species of Erycinidæ and thirty-six species of Lycænidæ with the descriptions of several new species and the erection of some new genera. *T. azia* Hew. and *T. salona* Hew. are new to his list and may be some of the doubtful species in the beon group.

In his book "Butterfly collecting in many Lands," Mr. G. B. Longstaff described a collecting expedition on the Island of Trinidad and added two species to the list, *T. spurius* Felder and *T. syncellus* Cramer. Being so close to the mainland of South America, it is natural of course to expect a large number of species and it is probable that additional species will continually come into the list.

SOME DRAGONFLIES OF A CONNECTICUT BROOK.¹

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With the western boundary of Connecticut constituting the south-eastern boundary of New York, any matter relating to the faunal status just across the line should be of peculiar interest to members of this Society; and where that fauna includes creatures unfamiliar to most of us, and concerning which but little has been published, no apology would seem to be required for calling your attention to a few of them.

¹ Read before the New York Entomological Society.

For these reasons I shall present a few brief notes of an afternoon's observations on a little brook at Litchfield made on the last day of June, 1913.

This town is situated in the northwestern corner of the state, in the so-called Berkshire Hills region, with a fauna and flora decidedly Alleghanian; but now and again indications are met of a southward extension of the Canadian. Especially is this true as respects the plant life and the birds, to which more particular attention has been given by the writer; but the insect fauna likewise shows a tendency toward the characteristics of more boreal conditions. With this suggestive preface of what the cold waters of this hilly country may offer, the subject of my paper must now be introduced.

A typical New England mountain brook comes tumbling down over the stones through a thickly wooded valley just north of the town. Meeting the village hill it veers to the east, there to be arrested by a dam to form a small mill-pond; then, liberated again, it sweeps on around the foot of the village and empties into a larger pond. Its flow from this continues, and of differing character; but we have to do now only with an eighth of a mile of its course between the heavily wooded, steep-sided hog-back hills. The woods are of oak, chestnut, beech and birch, with an occasional red elder and frequent hemlocks, while great masses of laurel in full bloom bank the brook in a glory of pink and white. On either side ring out the nuptial songs of northern warblers, such as the Black-throated Blue and the Canadian Warbler, with others more to be expected, all busily engaged in the duties and joys of raising their broods; and into the sunlit spaces over the water, which one must perforce wade, dart infrequent dragonflies, teasing the eyes to follow them through the intervening shadows. One's attention is caught by one of these of unfamiliar aspect, evidently an *Agrion*, skimming hither and thither close to the ripples. Its flight too is peculiar, not after the manner of *A. maculatum*, slowly fluttering in an aimless way among the verdure along the banks, nor even of the more active *A. aquabile*, also present in some numbers, but suggesting more the hunting tactics of a Gomphine, even to the frequent alighting for rest on the mid-stream stones. It proves to be *A. amatum*, Hagen, described from New Hampshire, and in the state New York recorded on two occasions from the Adirondack region. Others are soon noted, the females with strongly

flavescient but unmarked wings, the males clearer winged, but with dark tips to the hind ones. They were fairly numerous, and, flashing back and forth over the brook, with the sunlight making resplendent the long blue-green metallic abdomens of the males and the more coppery females with their bright yellow sides, the community presented a never to be forgotten scene. The males frequently indulged in contests, usually two, sometimes three, taking part in vigorous chasings and dodgings which would be maintained for several minutes at a time, when they would separate, resume their hunting, then suddenly renew the game. While they never seemed actually to close in battle, yet the performance strongly suggested conflict, and bore little resemblance to the graceful dance of *A. maculatum*.

Soon after the dip of the sun back of the steep hill forming the brook's western bank, these Agrions began to seek rest from their labors, perching on the leaves of bordering shrubs and trees at heights ranging from six to twelve feet up, where they doubtless spent the night.

It was the writer's first introduction to this species, so there was added the joy of discovery to the æsthetic delight a colony of such beauty must have given any beholder.

A hemlock-shaded, rockbound pool setting off from the main course of the brook proved to be the home, or resort, of the more familiar *Cordulegaster diastatops*. From time to time one of three or four individuals would leave its resting place on the low branch of an overhanging bush, and sweep with lightning speed over its clear depths; then circling its shores from end to end it would reach and follow the narrow grass-arched connecting channel out to the stream and back. On one of these forays the capture of an *Argia putrida* was noted. It was done in the twinkling of an eye, in spite of the activity and apparent agility of the prey. The dragon saw the damsel, seized her, and that was the end of her story. With his quarry he rose at once and almost vertically to a branch at the height of about forty feet, where he proceeded to the undisturbed enjoyment of his meal. This seeking of a lofty altitude for that purpose seems to be customary with members of this genus, it having been noted on several occasions in the case of both this species and *C. obliquus*.

Although several species of Libellulidæ were observed, they were probably for the most part wanderers; the character of this part of

the brook being unsuited to open water species. It was eminently suitable, however, for certain of the Gomphinæ, and of these *Ophiogomphus johannus* was the largest and most conspicuous, with its rich green thorax and broadly spatulate abdomen plainly apparent as it hunted low after the manner of its kind. By no means abundant, it was yet apt to be found wherever the brook's bed widened sufficiently to disclose uncovered gravel along its edge.

This species, when ready to abandon its nymphal existence for that of the imago, leaves the water at some sandy or gravelly margin where, resting on the ground or on the side of a stone close to the water's edge, it awaits the splitting of its dorsal covering, and slowly drags itself from its prison house. The metamorphosis takes place toward the end of May, and even on sunny days occurs several hours after sunrise.

As the nymph is as yet undescribed I present herewith a brief description based upon the exuvie.¹

Next in size, but much rarer, was *Gomphus brevis*, a species included in the New Jersey list, but distinctly northern in its range. Nothing distinctive concerning its habits was noted on this occasion, the mere fact of its presence in the state alone entitling it to mention.

And lastly the dainty little *Lanthus albistylus*, hardly larger than the *Argias*, swift-flying, and resting preferably on stones not over an inch or so above the surface. While but one female of this species was taken, the males were found sparingly all along the course of the brook under observation; but always singly, each apparently excluding his confrères from his own particular hunting ground.

Except for *Argia mocsta putrida*, fairly common, and hunting and resting for all the world like a Gomphus too, this part of the brook was not attractive to many other Zygoptera, the only other species noted being a very few *Enallagma geminatum*, *exsulans* and *cbrium*, all exceedingly abundant further down its course, the omnipresent *Ischnura verticalis*, and one *Chromagrion conditum*, the latter the only one ever taken by me at Litchfield.

Making a brief digression to the west of the brook, we come upon a small, cold, spring-fed pond. Its shores are for the most part steep and rocky, and all well wooded; but an occasional narrow stretch of sand and stones, gay with rose pogonias and pitcher plants

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in flower, is bordered with a fringe of reeds and rushes in shallower water. In the latter environment was found a colony of the beautiful little *Leucorrhinia frigida* of Hagen, described from Massachusetts, but recorded from comparatively few places, and these mostly to the north of us. So it was with especial delight that I seized the opportunity for making the acquaintance of these little strangers. Strongly pruinose, the eye from its vantage point on the shore held them easily, particularly as they seemed less inclined than their cousin *L. intacta* for far-reaching excursions, preferring to keep in close proximity to the reeds. Here they hunted, darting actively about close to the surface, dodging here and there among them, and occasionally alighting for rest on their stems only three or four inches above the breeze ripples. Their more numerous associates were *Ladona exusta*, with *Gomphus exilis* quite common; and in lesser numbers *Celithemis clisa* and other generally distributed species.

Returning to the brook, it was soon wholly in shadow, though the warm sunshine still bathed the opposite hillside. The time had come to turn back, and I stood in midstream beneath a great low-hanging oak limb weighing the difficulties of the way home through the dense steep-sloping woods, with its laurel tangles and fallen logs, against the retraversing of the rough stony bottom involving certain infliction of many ankle twists and foot-bruises, already suffered to excess on my way up stream. Over the water swiftly zigzagged innumerable Tipulidæ, not seen while the sunlight fell on it, and so close to the surface as to seem actually to be skimming it; while on a stone at my feet crawled the full grown larva of a stone-fly, soon to leave his fast-clinging exuvia to bleach there throughout the summer. The sudden swoop of a Broad-winged Hawk, as it swept beneath the oak bough on its course down the valley, almost startled me from my footing, but left the wild beauty of the scene more than ever wrapped in breathless silence. Standing there, my indecision brought its reward in the joy we all feel in finding ourselves the observers of shy wild life unconscious of our presence. About two rods down stream there sprang out from the bushes an old weasel, immediately followed by another. With slow, graceful leaps from stone to stone they crossed the brook, there about twenty feet wide. Reaching the opposite shore they found a big flat rock in convenient position, where for a while they sported with each other like kittens. After a bit

they sat up, very erect, their white underparts toward me, and remained quite motionless for several seconds. Apparently satisfied with conditions, they turned and disappeared into the bushes, only to appear again in a moment with one—two—three others; whereupon all five in single file, set out on their deliberate return to the bank where the two had first appeared. To see such wild creatures in such numbers, and at such leisure, was a new experience for me, and a very delightful climax to my afternoon on the brook.

ON THE WORK OF THE LATE DANIEL W. COQUILLET AND OTHERS.

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Mr. C. H. T. Townsend has made a recent publication¹ the occasion for some critical remarks concerning the work of contemporary workers in the Muscoidean flies. The greater part of this comment is distinctly favorable in character. In fact, an odor of flattery is quite perceptible throughout most of the paper. This complimentary attitude is suddenly discarded at the conclusion of his remarks with the following statement: "Practically all of the work reviewed above is *constructive*, and as such it is to be emulated. . . . Contrasted with this work is that performed by the late Mr. Coquillett, which was *destructive* in that it attempted to sink into the synonymy valid generic and specific names. Such work is a pulling down which leaves us worse off than before."

Thus according to Mr. Townsend our work is constructive, but strange to say, he fails to perceive the fact that it is based almost wholly upon that of the late Mr. Coquillett, which is denounced as "destructive." Behold a paradox. The permanent based upon the ephemeral, which is absurd, as brother Euclid is fond of remarking.

Now what are the facts concerning this cataclysmic work of the late Daniel W. Coquillett as viewed by an earnest, if humble, student of the same?

¹ JOUR. N. Y. ENT. SOC., Vol. 21, p. 301.